

**SUPPLEMENTAL DETAILED ACTION**

**(Corrected action)**

This Office action is responsive to communication received 12/18/2009 – Amendment, Election, and Replacement Drawings; 05/27/2010 – Applicant-initiated Telephone Interview.

**In response to applicant's telephone interview of May 27, 2010 regarding the last Office action, mailed 03/31/2010, the following corrective action is taken.**

**The period for reply of 3 MONTHS set in said Office Action is restarted to begin with the mailing date of this letter.**

During the interview on May 27, 2010, applicant's attorney requested clarification regarding the use of the Franklin reference (USPN 7,407,443) under §102(b), noting that applicant's earliest priority filing date is 10/14/2003, prior to the filing date of 09/07/2004 of the Franklin reference. The examiner reviewed the file history and determined that an inadvertent error in identifying the proper priority data may have initially prompted the inclusion of the Franklin reference as suitable under §102. However, it would clearly appear that the Franklin patent does not qualify as prior art. The examiner noted that a supplemental Office action correcting the deficiencies would be promptly prepared and mailed for applicant's review. A supplemental Office action follows, below:

***Drawings***

The replacement drawings were received on 12/18/2009. These drawings are acceptable to the examiner.

***Status of Claims***

Claims 1-13 remain pending.

***Election/Restrictions***

Claims 2-5 have been withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 12/18/2009. In addition, claim 7, which depends from non-elected claim 5, has been withdrawn from further consideration. Thus, the following action on the merits is directed to claims 1, 6 and 8-13.

**FOLLOWING IS AN ACTION ON THE MERITS:**

***Claim Objections***

Claims 1 and 8 are objected to because of the following informalities:

As to claim 1, line 1, "cub" should read --club--;

As to claim 1, line 7, "clubs head" should read --club head's--;

As to claim 1, lines 9 and 10, in each line "mass per length unit" should instead read --mass per unit length-- for better readability;

As to claim 8, line 2, "centre" should read --center-- . Also, is this referring to the geometric center? Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

**Claims 1, 9, 10, 11 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Bradford (USPN 6,652,390).**

As to claim 1, Bradford shows a putter club (10) with heel (22) and toe (20) projections diverging relative to one another in a direction away from a striking face. As to the claimed requirements for moment of inertia, the claim notes that the a substantial portion of the moment of inertia of the toe and heel wings around a vertical axis coinciding with the club head center of mass is obtained by the mass of the rear end portions of the wings, with the mass per unit length of the end portion of each wing being substantially larger than the mass per unit length of the adjacent portions of the wings. Here, Bradford meets this limitation, as Bradford details that the ends or rear portions of the toe and heel wing members are formed of a relatively heavy material such as tungsten, while the mid portions of the wings (see portions 24, 28 in Figure 4) are formed of a lighter weight material such as aluminum. Thus, the mass per unit length of the end portion of each wing is substantially larger than the mass per unit length of the adjacent portions of the wings. Hence, a substantial portion of the moment of inertia of the toe and heel wings around a vertical axis coinciding with the club head center of mass is obtained by the mass of the rear end portions of the wings. See also column 3, lines 47-65, wherein Bradford includes a discussion about the enhanced moment of inertia.

As to claims 9 and 10, see Figures 3 and 4, wherein Bradford shows that the heel and toe portions would appear to have an L-shape, if viewed in cross-section. Note the similarity of the shape of the putter head in Figure 3 of Bradford as compared to Figure 6 of applicant's disclosure.

As to claims 11, the rear portions (61, 62) in Bradford are formed of tungsten material while the front portion of the head comprises aluminum. See Figure 6 and column 3, lines 47-65. Note, the applicant has disclosed that the use of tungsten is acceptable for the material of high specific gravity and that aluminum is acceptable for the material of the lower specific gravity within the claimed ranges.

As to claim 13, see Figure 4, wherein the rear and outer portions of the club head are formed essentially of tungsten and the middle portions of the club head are formed of aluminum. Note, the applicant has disclosed that the use of tungsten is acceptable for the material of high specific gravity and that aluminum is acceptable for the material of the lower specific gravity within the claimed ranges.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 1 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Channell (USPN D359,330) in view of Bradford (USPN 6,652,390).**

As to claim 1, Channell lacks a discussion of the moment of inertia of the wings as well as the mass per unit length. Bradford goes into some detail regarding the larger moment of inertia created by weighted portions (61, 62). See column 3, lines 47-65 in Bradford. The higher moment of inertia and higher mass per unit length at the end portions made possible by the weighted members would clearly serve to reduce the likelihood of club head twisting during off-center shots, thereby enabling a struck ball to be propelled straighter, with increased accuracy. In view of the patent to Bradford, it would have been obvious to modify the device in the prior art to Channell by providing a substantial moment of inertia around a vertical axis through an increase in the weighting of the end portions of the toe and heel wings, the motivation to help reduce club head twisting when a golf ball is not struck on center. With respect to the remaining limitations in claim 1 and with respect to the Channell device, note that Channell shows toe and heel wings extending outwardly from the toe and heel portions, respectively, and diverging relative to each other in a direction away from a striking face.

As to claim 6, Figures 1 and 2 in Channell clearly show that each wing includes an inwardly-facing, rectilinear side edge portion lying essentially parallel to each other and being, in a horizontal plane, essentially at right angles to the striking face.

**Claims 8 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bradford (USPN 6,652,390) in view of Thomas (US PGPUBS 2005/0137027).** The patent to Bradford differs from the claimed invention in that Bradford does not detail that the mass center of the club head is to be positioned lower than the center of the striking face. Here, "center of the striking face", as claimed, is being interpreted as the

geometric center of the striking face. Bradford does not specifically teach that the material of higher specific gravity is placed in a lower portion of the head, which would clearly enable the center of mass to be located lower than the center of the striking face. Thomas teaches the advantage of locating the center of mass below a horizontal plane that contains the center of the striking face to create a vertical gear effect. See paragraphs [0028] and [0030] in Thomas. In view of the publication to Thomas, it would have been obvious to modify the device in the cited art reference to Bradford by locating the mass center of the head below the horizontal center of the striking face, the motivation being to create a favorable launch condition through a reduction in backspin imparted to a struck ball.

#### ***Further References***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Refer to the FORM PTO-902, mailed 03/31/2010.

Figure 12 in Rife;

Figure 7 in Hasegawa;

Figure 1 in Pamias;

Figure 3 in Bradford ('304);

Figure 2 in Madore;

Figure 2 in Ballow;

Figure 2 in Bradford ('041);

Figure 4 in Bradford ('274);

Figure 2 in Fenton;

Figures 1 and 4 in Strand;

Figure 2 in Chorne.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sebastiano Passaniti whose telephone number is 571-272-4413. The examiner can normally be reached on Monday through Friday (6:30AM - 3:00PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eugene L. Kim can be reached on 571-272-4463. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Sebastiano Passaniti/  
Primary Examiner  
Art Unit 3711

S.Passaniti/sp  
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